

ABSTRACT

In a resist removing apparatus of the present invention, a distance between a surface of a substrate (10) and an ultraviolet rays transmission plate (3) is adjusted to a predetermined distance by an upward and downward moving mechanism (2b) of a substrate stage (2), and O_3 water is supplied from an O_3 water supply section (12) to a treatment space formed between the surface of the substrate (10) and the ultraviolet ray transmission plate (3) to form a liquid film (41). Various kinds of active oxygen are generated by emitting ultraviolet rays of wavelengths of 172 nm to 310 nm to the liquid film (41) by an ultraviolet lamp, and dissolving O_3 , and thereby the resist is dissolved and removed. This construction makes it possible to form the liquid film on the resist and dissolve and remove the resist by using the active oxygen generated in the liquid film, and achieve a breakaway from the resources and energy-intensive technique, namely, realization of an environmentally compatible technique which does not depend on high energy and chemical solvents for removing a resist.